

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q76816

Kenichi NAKATATE, et al.

Appln. No.: 10/649,657

Group Art Unit: 1791

Confirmation No.: 6914

Examiner: Queenie S. DEGHAN

Filed: August 28, 2003

For: OPTICAL APPARATUS

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Pursuant to the Pre-Appeal Brief Conference Pilot Program, and further to the Examiner's Final Office Action dated April 23, 2008, Applicant files this Pre-Appeal Brief Request for Review. This Request is also accompanied by the filing of a Notice of Appeal.

I. Current Rejections which are the Subject of this Appeal:

Claims 1 and 5-10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0145711 to Magome et al. (hereinafter "Magome"), in view of JP 2000-103629 to Urano et al. (hereinafter "Urano"), and further in view of JP 2000-095535 to Fujinoki et al. (hereinafter "Fujinoki"). Claims 11 and 15-21 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,222,610 to Hagiwara et al. (hereinafter "Hagiwara"), in view of Urano, and further in view of Fujinoki. Finally, claims 27-28 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Magome, in view of Urano, in view of Fujinoki, in view of Hagiwara, and further in view of U.S. Patent No. 5,867,618 to Ito et al. (hereinafter "Ito").

II. Arguments:

A. Independent Claim 1

With respect to claim 1, the Examiner acknowledges that Magome fails to teach or suggest the feature of wherein the hydrogen has a partial pressure of 0.01 to 500 kgf/cm², as claimed. Nevertheless, the Examiner alleges that Urano remedies the deficient teachings of Magome since Urano teaches placing a quartz glass article in an atmosphere comprising hydrogen with a partial pressure of 0.1 – 10 atm when irradiating the glass article with UV light. As such, the grounds of rejection allege that it would have been obvious to one of ordinary skill in the art to utilize the partial pressure of hydrogen, as taught in Urano, in the apparatus of Magome in order to inhibit the increase loss of ultraviolet transmission of the optical elements, as taught by Urano. Moreover, the Examiner alleges that it would have been obvious to utilize the heat treatment of Fujinoki for the optical elements placed in the container of Magome to provide for an optical element that has high endurance for irradiation of an UV laser, as taught by Fujinoki.

There are clear errors in the Examiner's rejection of claim 1 for *at least* the reasons set forth below. Contrary to the grounds of rejection, even under the recent KSR Int'l Co. v. Teleflex Inc. decision, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.¹ Applicant submits that there is no rational underpinning to support the Examiner's conclusion of obviousness.

For example, there would have been no reason for a person of ordinary skill in the art to have combined the teachings of Magome and Urano to arrive at the recitations of claim 1. While

¹ KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (U.S. 2007).

Urano teaches an atmosphere containing hydrogen, Urano's atmosphere is used only during the manufacturing process for the glass article (optical fiber). Specifically, according to the disclosure of Urano, only hydrogen contained in a silica glass article due to a pre-processing under hydrogen-containing atmosphere can be used to repair the defects in the silica glass article produced by UV light. Further, such a repairing effect taught in Urano cannot last for a long time because the hydrogen contained in the silica glass article is continuously consumed to repair the defects.

However, as mentioned in paragraph 0008 of the present specification, for example, "synthetic silica generally includes defect precursors which could be converted into defects when energy is applied, and which cannot be reduced by the effects of hydrogen, because such defect precursors do not react with hydrogen; therefore, further defects may be produced from the defect precursors when ultraviolet light having high energy is emitted thereon." Because neither Magome, nor Urano, provide any teaching or suggestion whatsoever regarding the continuous production of defects in a silica glass article, due to UV light, from defect precursors, a skilled artisan would not have had any reason to arrive at the invention of claim 1 by combining the teachings of Magome with those of Urano.

Furthermore, Fujinoki fails to remedy the deficient teachings of Magome and Urano. Fujinoki teaches a function gas (i.e., air, inert gas, gas containing hydrogen). However, like Urano, Fujinoki's function gas is used only during the manufacturing process (i.e., pre-processing). Therefore, Fujinoki would not have provided any reason for a person of ordinary skill in the art achieve the invention of claim 1 either.

Accordingly, there are clear errors in the Examiner's rejection of claim 1 for *at least* these reasons. Further, the dependent claims 4-9 and 27-28 are patentable over the cited references *at least* by virtue of their dependency on claim 1. Thus, Applicant respectfully requests that these rejections be withdrawn.

B. Independent Claim 11

The grounds of rejection allege that Hagiwara teaches an input lens system ILS and a gas exchange mechanism for the input lens system ILS and that the inert gas used in the gas exchange mechanism may comprise hydrogen. The Examiner acknowledges that Hagiwara fails to teach or suggest the feature of wherein the hydrogen has a partial pressure of 0.01 to 500 kgf/cm², as recited in claim 11. Nevertheless, the grounds of rejection again apply Urano, alleging that Urano teaches placing a quartz (silica) glass article in an atmosphere having a partial hydrogen gas pressure of 0.1 – 10 atm. Thus, the grounds of rejection allege that it would have been obvious to one of ordinary skill in the art to utilize the partial pressure of hydrogen, as taught in Urano, in the apparatus of Hagiwara in order to inhibit the increase loss of ultraviolet transmission of the optical elements, as taught by Urano.

There are clear errors in the Examiner's rejection of claim 11 *at least* because, a skilled artisan aiming to improve the prevention of defects in silica glass products (as opposed to other materials), would not have had any reason to refer to Hagiwara. Moreover, contrary to the requirements of MPEP §707.07(f), the Examiner has failed to substantively respond to Applicant's previous arguments that a person of ordinary skill in the art would have recognized that the deposition of a haze substance on an optical member does not depend on the material of the optical member and, therefore, would not have looked toward Hagiwara for these reasons. Indeed, the Examiner does not provide any substantive response to such arguments whatsoever.

To the contrary, the grounds of rejection merely allege that Hagiwara provides for an apparatus filled with a gas containing hydrogen, a first light transmission window, and an optical element in the container and that, thus, a skilled artisan would have been motivated to combine Hagiwara with Urano for these reasons alone.

However, contrary to the grounds of rejection, even under the KSR Int'l Co. v. Teleflex Inc. decision, rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.² Here, the grounds of rejection have conclusively alleged that a skilled artisan would have been motivated to combine the teachings of Hagiwara with the cited references without substantively responding to Applicant's arguments that there would not have been any rational underpinning to support this conclusion.

Accordingly, there are clear errors in the Examiner's rejection of claim 11 for *at least* these reasons. Further, the dependent claims 15-21 are patentable over the cited references *at least* by virtue of their dependency. As such, Applicant respectfully requests that these rejections be withdrawn.

Respectfully submitted,

/ Andrew J. Taska /

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER

Date: July 21, 2008

Andrew J. Taska
Registration No. 54,666

² KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (U.S. 2007).